



SIR WILFRID EDWARD LE GROS CLARK
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Wilfrid Edward Le Gros Clark was born on 5 June 1895, at Hemel Hempstead, a son of the Reverend Travers Clark. He was educated at Blundell's School, Tiverton, and at St Thomas's Hospital, a medical school with which his family already had distinguished associations. To this day a bust of his grandfather, a St Thomas's physician, stands in the Entrance Hall of the Hospital. He qualified in medicine in 1916, and at once joined the Royal Army Medical Corps in which he served with the rank of Captain during the First World War. On demobilization in 1918 he became a Demonstrator in Anatomy at St Thomas's under Prof. F. G. Parsons and began a long and fruitful career in teaching and research. From the beginning his interests were directed towards the contents of the cranial cavity and during his period as a demonstrator he prepared his first paper 'On the Pacchionian Bodies' which was published in this *Journal* in 1920. For a first paper it is remarkable; it already shows the clear and pleasant style of writing with which we have become so familiar in many publications, and is still referred to as an important contribution to our knowledge in this field.

In 1920 he was appointed Principal Medical Officer of Sarawak, Borneo, where he remained for three years. Here, it is said, his medical achievements earned him the title of 'Great Chief of all Witch-Doctors', but he found time also for the study of primates and insectivores in their natural environment, and formed the collections, particularly of *Tarsius* and *Tupaia*, which were to be the basis of much future work. This period in Sarawak was of crucial importance in his career. It stimulated a permanent interest in the classification, evolution and behaviour of primates as well as in the ethnology and social and political problems of the peoples of the East Indies. In a personal sense, its importance was even greater and more propitious, for towards the end of this period he married.

He returned to England in 1924 to be placed in charge of the Department of Anatomy in St Bartholomew's Hospital Medical College as Reader, being promoted to the University Professorship there in 1927. At St Bartholomew's his work on the detailed structure and comparative anatomy of the nervous system was begun and brought into relation with his interest in primate evolution. It led to an important series of papers on such subjects as the visual cortex of primates, the oculomotor nucleus, the cerebral hemispheres of a gorilla, the brain of the *Macroscelididae* and the thalamus of *Tupaia*. Microscopic observations were combined with macroscopic and already there was abundant evidence of that critical and cautious attitude towards interpretation, with a reluctance to draw important conclusions from isolated findings, that was to distinguish all his work. It was an attitude which was not always characteristic of comparative neurology at that time, particularly when problems of primate and human evolution were involved.

Work on material collected in the field is unavoidably descriptive and morphological; it has great limitations, and, particularly in the nervous system, can often lead only to tentative conclusions. It seems that about this time, still at St Bartholomew's, Le Gros as he is to so many of us, began to consider the possibilities of an experimental approach to anatomical problems. In 1927, for example, he read a paper to the Society on the reactions of synovial membrane and articular cartilage to injections of trypan blue into the joint cavity. In developing an experimental approach, he was at one with his friend, H. H. Woollard, at that time Assistant Professor of Anatomy at University College and later his successor at St Bartholomew's. It was a friendship of outstanding importance for anatomy, sadly broken by Woollard's untimely death in 1939. These two men were the dominant personalities associated with that enlargement of anatomy, to include microscopic and experimental observations, which occurred in this country at that time. In 1929 he transferred to the Chair of Anatomy at St Thomas's Hospital Medical School where he succeeded Prof. Parsons.

Although he remained at St Thomas's only until 1934, this short period of 5 years established his reputation as a neuroanatomist and as an authority on primate and human evolution, a reputation which was international as well as national. His neurological work, often in collaboration with members of the clinical staff of the hospital, involved the application of degeneration techniques in a systematic analysis of thalamic structure (particularly thalamo-cortical relationships) and of the connexions of the optic pathways. It led to the publication of a number of papers which may fairly be described as classical, and which replaced much that was speculative and vague by knowledge which was precise and securely based. We are apt to forget how much of what is now text-book knowledge of the thalamus and visual pathways depends on the work done at this time at St Thomas's; and how important this work was in establishing the current attitude towards and indeed the modern terminology for these parts of the brain.

But Le Gros's other main interest received almost equal attention. 1934 saw the publication of *Early Forerunners of Man*. Those of us who had recently become anatomists can well remember the pleasure we received from this systematic and critical account of primate anatomy and evolution. Although now replaced by his *Antecedents of Man*, published in 1959, it has earned a permanent place in the literature of primatology. Its importance lay less perhaps in the facts which were presented in so readable a manner, than in the systematic way in which evidence from all parts of the body was taken into account. It was a most successful application of the principle which the author had so often emphasized, that in assessing taxonomic or evolutionary affinities, account must be taken of the total morphological pattern and not only of its individual units.

In 1934 the leading position Le Gros had attained in two of the most important fields of anatomical science was recognized by his appointment as Dr Lee's Professor of Anatomy in the University of Oxford, and in 1935 he was elected a Fellow of the Royal Society. The whole of his period of 28 years in Oxford has been marked by a steady flow of publications of first-rate importance. The Department of Anatomy soon became one of the most active in the country, and well known throughout the world. Post-graduate students and research workers were attracted from at home and

abroad and the stimulus they received has been an important cause of the renewed interest and rapid growth which has been so characteristic of anatomy in recent years.

It is difficult in a short article to give an adequate appreciation of the great volume of work which was accomplished by Le Gros and his colleagues at Oxford. Much of it, like his study of the lateral geniculate body and the significance of its lamination, has become basic neurological knowledge; what is perhaps the principal paper on this subject, published with Penman in 1937 and dealing with the localization of the connexions of small parts of the retina, has that elegance in planning, execution and interpretation which is characteristic of great scientific work. In the same class of achievement comes a later paper, published with Powell in 1953, and dealing with a related neurological subject, the projection of the thalamus on the post-central gyrus of the cortex and, somewhat earlier, the work on the regeneration of muscle fibres. His account of the hypothalamus in man, which appeared in this *Journal* in 1936, led in 1938 to the publication of a general comparative account of the morphology and connexions of this part of the brain which provided a basis for much subsequent investigation, both anatomical and physiological.

With many of us, as we grow older, our productivity diminishes. This has not been so with Le Gros. Rather it seems to have increased, and the post-war period has seen a series of papers on the anatomy of the olfactory system and its connexions which are as fundamental and important as his earlier publications. Many of the misconceptions which had arisen around the almost mystical idea of a rhinencephalon received rigorous criticism, and as a result of the work of Le Gros and his colleagues, we have now a far sounder basis for further progress in this particularly difficult and complex field. The work was brilliantly summarized in the Ferrier Lecture given to the Royal Society in 1957, and, as is characteristic of the best scientific work, it has stimulated not only interest, but fruitful research activity in many parts of the world.

Le Gros's contributions on the visual and olfactory systems, and to our knowledge of the thalamus and hypothalamus, would be more than enough to establish the reputation of any anatomist. Although coming to full fruition at Oxford, their origins can be traced in the studies begun at St Bartholomew's and St Thomas's. His work on primates and their evolution developed in the same way and by itself could have served as a creditable life's work. His papers on the South African Australopithecinae and on the Miocene fossil primates of East Africa are essential reading for anyone working in the field of primatology. They again show soundness and critical sense, this time in a particularly controversial field in which the relevant problems are of great and general human interest and where emotional preconceptions are not easily avoided. The material is scanty and difficult to interpret so that it is hard to steer between a negative reluctance to commit oneself to anything, and an opposing tendency to dogmatic speculation far beyond what the evidence would justify. Le Gros has kept the middle course very successfully and has played a large part in the development of a more rational and balanced attitude to the discoveries in this field.

The more recent period of his life has seen the publication of a number of lectures and addresses of a more general and philosophical character, of which 'Reason and Fallacy in the Study of Fossil Man' (1954), 'Hypothesis and Speculation in Scientific

Research' (1955), 'Sensory Experience and Brain Structure' (1958) are examples. Being based on a long period of original and precise investigation, they have a very great value and form a significant part of the whole body of his work. They remind us also of another aspect which has so far been neglected in this short note, his influence as a teacher. Many of us have had the pleasure and stimulus of hearing his lectures, always clear and delivered without pomposity, but it will be the fortunate generations of students who have passed through the departments where he has worked who could speak most warmly on this subject. His influence through his books has been world wide. The contributions on the nervous system to standard text-books are well known for their clarity and for the elimination of unnecessary detail, but no appreciation can be complete without reference to *The Tissues of the Body*. First published in 1939 and now in its fourth edition, it is still the most stimulating and readable text in the general field of anatomy which can be put into the hands of a student. We are all, whatever our special interests, in his debt for a work which has been a major factor in that reorientation of anatomy towards experimental methods and functional interpretation which has occurred during the lifetime of all of us over the age of 40. If anatomy is more 'alive' than it has ever been, if anatomical research is more active and the attraction it exerts on able minds so much the stronger, we owe this more to Le Gros than to any other single person in this country.

A career of such distinction and achievement has brought many honours, all of them borne lightly, and all of them, we like to think, reflecting some glory from the recipient on to the subject he professes. He was knighted in 1955. He has been President of the British Association, Master of the Salters' Company (a Guild of the City of London with which he has a hereditary connexion which can be traced back to 1736), Royal Medalist of the Royal Society, Viking Fund Medalist, Doyne Medalist and is an honorary graduate of a number of Universities. When the International Association of Anatomists met in Oxford in 1950, it was inevitable that he should be chosen as its President; those of us who attended that most successful meeting will always remember his distinction in the Chair and his geniality in extending the hospitality of his University and Department. They will also remember the charm of Lady Le Gros Clark in the support she then gave to her husband; indeed many of us have good reason to remember the friendliness she has shown to anatomists on numerous other occasions.

Lastly, there are his services to our Society. He was Editor of this *Journal* from 1939 to 1945, President from 1951 to 1953, and has been for many years a member of Council. But more than this, there has been his frequent and friendly presence at meetings over the whole period of his membership since 1920, and the encouragement he has given so readily, especially to those reading papers for the first time. We look forward to meeting him as frequently for many years to come. Meanwhile, it gives us all the greatest pleasure to dedicate this volume of our *Journal* to a great anatomist and in doing so, to wish him a long and happy retirement from the chores of a busy department.

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